

**CONFIDENTIAL**

14 March 1961

## MEMORANDUM FOR THE RECORD

SUBJECT: Tests of Projectiles Against Propane Containers

1. On 13 March 1961, [redacted] and the undersigned travelled to I Field, Aberdeen Proving Grounds, Maryland, to witness tests of projectiles against commercial propane containers, approximately 1/8" thick metal.

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2. The first test consisted of laying a container on its side on the ground. This container held 100 pounds of commercial grade Propane. On top of the container, just forward of center was fixed a 3.5" HEAT projectile. This round was detonated by insertion of a J-2 electric blasting cap into the base booster. This resulted in rupturing the container and the emission of a large fire ball and complete ignition of all Propane. Flame lasted for three to five seconds.

3. The second test was set up the same as Test No 1 except a 75mm HE M-48 round containing .8 pounds of TNT was used. This round was nose initiated by fixing a J-2 cap in the fuze well. The windshield on the round was removed and the nose was so located as not to be in contact with the tank but approximately 1/4" from it. Again a fire ball erupted but not so violently as Test No. 1. The container was not so badly damaged as Test No. 1 and some fuel remained inside burning for several minutes.

4. The third test consisted of laying three containers on their sides and placing them so that two on the bottom were about six inches apart and the third rested on top of the other two and in contact with each. A 3.5" HEAT round was placed on the top container as in Test 1. Detonation of the round produced a large fire ball but only from the top container which was badly ruptured and thrown approximately 150 feet. Each of the other containers were apparently undamaged but thrown, one 110 feet to the left and one 111 feet to the right.

5. The fourth test was set up as Test No. 3 but an M48 75mm HE round was used. Again a fire ball resulted but not so violent and enough fuel was left in the container to burn for several minutes. The two bottom tanks were undamaged and hardly disturbed by the blast, being moved only a couple of feet.

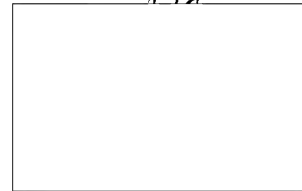
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6. As a result of these tests it is concluded that:

- (1) A 3.5" HEAT round is more effective than a M-48 75mm HE round in destroying commercial 100 pound propane containers.
- (2) Only the propane container hit by the round will result in fire.



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Distribution:

Orig - Weapons Gen'l - EB-180

1 -

1 -

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DD/P/TSD/EB [redacted] :mt

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